

M e m o r a n d u m

Date: August 15, 2016

To: The Commission
(Meeting of August 18th, 2016)

From: Hazel Miranda, Director
Office of Governmental Affairs (OGA) – Sacramento

Subject: **Commission Position on Energy Resource & Electric System Planning Legislation - AB 2454 (Williams): Demand Response (amended 8/2/16), AB 2630 (Salas): Central Valley Transmission & Renewables (amended 8/2/16), AB 2868 (Gatto): Energy Storage (amended 8/2/16), SB 886 (Pavley): Energy Storage (amended 8/1/16)**

RECOMMENDED POSITION: OPPOSE

REASON: The following bills prematurely impact the goals of integrated resource plans (IRP) and compromise their holistic approach by favoring specific clean energy resources. The intent of the IRP's are to optimize all types of clean energy resources so that greenhouse gas emission reduction targets are met at the lowest possible cost to ratepayers - established by SB 350 (De Leon, Chapter 547, Statutes of 2015). The California Public Utilities Commission (CPUC) and stakeholders are at the beginning stages of developing concrete proposals for IRP implementation. It is critical, in order for the CPUC to carry out the intent of the Legislature, per SB 350, that the CPUC be allowed to properly execute the IRP process.

SUMMARY OF BILLS & STATUS

- **AB 2454 (Williams): Demand Response (amended 8/2/16)**
Status – Senate Floor: Third Reading (as of 8/9/16)
 - 1) Requires the California Public Utilities Commission (CPUC) to consider the findings of the *2015 California Demand Response Potential Study* (unless they are superseded by subsequent studies) when meeting unmet resource needs through all available energy efficiency and demand reduction and demand response.

- 2) Requires the CPUC, prior to approving a contract for any new or repowered gas-fired generation resource, to require an Investor-Owned Utility (IOU) to demonstrate that it undertook all feasible efforts to meet any identified resource need through available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible.
- 3) Requires the CPUC to ensure that the IOU's procurement plans demonstrate that they meet the requirement by taking all feasible efforts to meet identified resources needs through available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible.

- ***AB 2630 (Salas): Central Valley Transmission & Renewables (amended 8/2/16)***

Status – Senate Appropriations Committee: Held in Suspense (as of 8/11/16)

- 1) Directs the California Independent System Operator (CAISO), when undertaking transmission planning activities, to take into consideration a report issued by the Governor's office on solar photovoltaic development in the San Joaquin Valley ("A Path Forward: Identifying Least-Conflict Solar PV Development in California's San Joaquin Valley") as well as a set of principles for transmission corridor planning known as the "Garamendi Principles."

- ***AB 2868 (Gatto): Energy Storage (amended 8/2/16)***

Status – Senate Floor: Second Reading (as of 8/11/16)

- 1) Requires the CPUC, to direct the IOU's to file applications for programs and investments to accelerate widespread deployment of behind the meter distributed energy storage systems.
- 2) Requires the CPUC to first approve programs and investments that provide distributed energy storage systems to industrial, commercial, and low-income customers; then beginning in January 1, 2019, to approve programs and investments offered to residential customers who enroll in time-of-use pricing.

- ***SB 886 (Pavley): Energy Storage (amended 8/1/16)***

Status – Assembly Appropriations Committee: Held in Suspense (as of 8/11/16)

- 1) Requires the CPUC, by January 1, 2018, to determine appropriate energy storage system procurement targets, if any, for each load-serving entity (LSE), to be achieved by December 31, 2030.
- 2) Requires the governing board of each community choice aggregator (CCA) and each local publicly owned electrical utility (POU), by July 1, 2018, to determine appropriate energy storage procurement targets, if any, to be achieved by December 31, 2030.
- 3) Requires the CPUC to require each IOU to offer time-of-use pricing or dynamic pricing to customers using energy storage at their premises.

CURRENT LAW

Existing law:

- Requires each IOU to file with the CPUC a proposed electricity procurement plan, and requires the CPUC to review and accept, modify, or reject that plan.
- The procurement plan must include, among other elements, a showing that the IOU will first meet its unmet resource needs through all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible. (PU Code Section 454.5)
- Requires the CPUC to: a) identify a diverse and balanced portfolio of resources needed to ensure a reliable electricity supply that provides optimal integration of renewable energy in a cost-effective manner. The portfolio shall rely upon zero carbon-emitting resources to the maximum extent reasonable and be designed to achieve any statewide greenhouse gas (GHG) emissions limit established pursuant to the California Global Warming Solutions Act of 2006; b) direct each IOU to include, as part of its proposed procurement plan, a strategy for procuring best-fit and least-cost resources to satisfy the portfolio needs identified by the CPUC; and c) ensure that the net costs of any incremental renewable energy integration resources procured by an IOU to satisfy the need identified by the CPUC . (Public Utilities Code Section 454.51, emphasis added)
- Requires the CPUC to adopt a process for each LSE, to file an integrated resource plan to ensure LSEs meet the GHG emissions reduction targets for the electricity sector; procure at least 50 percent eligible renewable energy resources by December 31, 2030; enable each LSE to fulfill its obligation to serve its customers at just and reasonable rates; minimize impacts on ratepayers' bills; ensure system and local reliability; strengthen the diversity, sustainability, and resilience of the bulk transmission and distribution systems, and local communities; enhance distribution systems and demand-side energy management; and minimize localized air pollutants and other GHG emissions, with early priority on disadvantaged communities. (PU Code Section 454.52)
- Requires that the California Energy Commission (CEC) set statewide targets that will achieve a cumulative doubling of energy efficiency savings from all electricity and natural gas retail end-users by 2030, to the extent that is feasible, cost-effective and will not adversely impact public health and safety. (Public Resources Code Section 25310(c))
- Requires the CPUC to establish targets for all potentially achievable cost-effective electricity efficiency savings. (Public Utilities Code Section 454.55)
- Requires the CPUC to establish targets for all potentially achievable cost-effective natural gas efficiency savings; and that natural gas IOU's shall first meet their unmet resource needs through all available natural gas efficiency and demand reduction

resources that are cost effective, reliable, and feasible. (Public Utilities Code Section 454.56)

- Requires each POU to adopt and regularly update an integrated resource plan substantially similar required of the integrated resource plans developed by LSEs, to be reviewed by the CEC. (Public Utilities Code Section 9621)
- Allows the CPUC to collect up to \$83 million annually until December 31, 2019, and use these funds to provide incentives for distributed energy resources, including energy storage systems, until January 1, 2021. (Public Utilities Code Section 379.6)
- Directs the CEC and the CPUC, where feasible, to authorize procurement of resources to provide grid reliability services that minimize reliance on system power and fossil fuel resources and, where feasible, cost effective, and consistent with other state policy objectives, increase the use of large- and small-scale energy storage. (Public Utilities Code Section 400)
- Requires the CPUC to determine appropriate targets, if any, for LSEs to procure energy storage systems. Requires LSEs to meet any targets adopted by the CPUC by 2015 and 2020. Requires POUs to set their own targets for the procurement of energy storage and then meet those targets by 2016 and 2021. (Public Utilities Code Section 2835 et seq.)
- Public Utilities Code Sections 399.11 – 399.32 establishes the Renewables Portfolio Standard for LSE's and the POUs; delegates authority to CPUC and the CEC, respectively.
- Requires all LSEs, including POUs, to procure 50 percent of their annual electricity retail sales from eligible renewable energy resources by 2030. (Public Utilities Code Section 399.11 et seq.)

DIVISION ANALYSIS (Energy Division):

The demand response mandates in AB 2454 (Williams), the San Joaquin Valley solar photovoltaic focus in AB 2630 (Salas), and the energy storage mandates in AB 2868 (Gatto) and SB 886 (Pavley), if enacted, prematurely impact the goals of the integrated resource plans (IRP) established by SB 350 (De Leon, Chapter 547, Statutes of 2015). This is concerning, especially since the CPUC and stakeholders are just beginning to develop concrete proposals for IRP implementation. There is no doubt that the IRP's will have a heavy focus on clean energy resources such as renewable energy, energy efficiency, demand response, and energy storage. In addition, any analysis on renewable energy potential for the IRPs will include exploring renewable energy potential in the San Joaquin Valley. That stated, any additional statutory requirements that dictate special studies weighted toward specific resources or regions will limit the ability of CPUC staff, stakeholders, and sister agency partners to look at a full range of resource alternatives to find the optimum mix of clean energy resources needed to achieve California's pioneering greenhouse gas (GHG) emission reduction goals.

As established by SB 350 (De Leon, Chapter 547, Statutes of 2015), the CPUC is required to develop a process for integrated resource plans from and all load serving entities (LSE's) that meet eight specific requirements, including the state's GHG emission reduction targets, system reliability, and just and reasonable rates. In February 2016, the CPUC opened a proceeding (R.16-02-007) to implement these IRP requirements.

A critical outcome of the IRP process will be to better optimize clean energy resources so that GHG emission reduction targets are met at the lowest possible cost to ratepayers. Granting certain types of resources procurement priority works against the objective of the IRPs, specifically the requirement that the CPUC identify a "diverse and balanced portfolio of resources" (Public Utilities Code Section 454.51). Creating a pool of clean energy resources is an improvement over having just one or two, and making the pool as inclusive as possible of these resources is important in achieving the important legislative requirements embodied in SB 350 (De Leon, Chapter 547, Statutes of 2015), most notably, the state's long-term GHG emission reduction goals.

This optimization of resources will require new modeling techniques that will be developed in the IRP proceeding to shift away from the current "siloe" resource procurement approach of setting goals for individual resources, specific technologies, or specific geographic regions. A fundamental objective of the IRP process is to generate a multi-LSE optimal resource portfolio that not only represents a technology-neutral analysis, but also accounts for the load served by both large IOUs and other LSEs in the state, including electric service providers, community choice aggregators, small multi-jurisdictional IOUs, and electric cooperatives.

To meet the IRP requirements and objectives the Energy Division of the CPUC on August 11, 2016, released a concept paper on IRPs, and parties to the IRP proceeding were asked to provide written comments on the concept paper. The primary purpose of the concept paper is to serve as a high-level concept piece that informs the development of an IRP draft staff proposal to be issued in December 2016, leading to a Commission Decision in spring 2017 that adopts guidance for the CPUC IRP 2017 process.

Implementing a fully developed IRP process will be a multi-year, iterative process. While the current proceeding expects the first IRPs to be filled in 2017, staff expects subsequent IRPs to rely on improved technical analysis to assess a resource's value to the electric system, to customers and towards achieving the state's GHG emission reduction goals, relying less and less on "siloe" resource procurement and goal setting.

Thus, the demand response mandates in AB 2454 (Williams), the San Joaquin Valley solar photovoltaic focus in AB 2630 (Salas), and the energy storage mandates in AB 2868 (Gatto) and SB 886 (Pavley), while laudable in their intent, actually work counter to the Legislature's foremost energy policy action from 2015 – SB 350 (De Leon, Chapter 547, Statutes of 2015). The CPUC is working with the California Energy Commission (CEC), Air Resources Board (CARB), and California Independent System

Operator (CAISO) to coordinate IRP planning with the current joint agency forecasting and electricity system planning processes. Close coordination with the CEC will be needed during the IRP portfolio generation process in particular, as the CEC is responsible for overseeing the IRP filing process for 16 publicly-owned utilities. The CPUC will also provide assumptions and scenarios to be used in the CAISO Transmission Planning Process, as electric transmission system development and/or expansion approvals could impact the optimal mix of resources in the IRP's.

CUMULATIVE RATEPAYER IMPACT

Each bill has the potential to increase ratepayer costs:

- **AB 2454 (Williams)** could increase ratepayer costs if demand reduction or energy efficiency resources are procured that are not the least cost options for addressing a need.
- **AB 2630 (Salas)** could lead to increased overgeneration or could displace other lower cost resources, resulting in increased costs to ratepayers.
- Both **AB 2868 (Gatto)** and **SB 886 (Pavley)** have the potential to increase ratepayer costs because procurement of energy storage is currently expensive relative to other resource types for certain use cases.

CUMULATIVE FISCAL IMPACT

The total fiscal impact of all four bills would be \$700,000 in total consulting budgets and \$837,018 per year in new positions, as follows:

- Two Public Utility Regulatory Analysts V (PURA V)
- Two Administrative Law Judge II (ALJ II),
- One Public Utility Counsel (PUC)

The fiscal impact of each bill is as follows:

AB 2454 and **AB 2630** have no fiscal impact.

AB 2868 would require the CPUC to establish new IOU programs and investments to accelerate deployment of energy storage systems that achieve ratepayer benefits such as grid benefits, customer bill savings, but without ratepayer subsidy. This would require one consolidated or three separate 18-24 month application approval proceedings and an implementation roll-out phase. Significant analytic tools and procedural effort will be required to determine the appropriate rate design, cost recovery, program design, and storage and energy management systems that will achieve the goals while keeping ratepayers whole. This is potentially equivalent to establishing a "Net-Energy Metering (NEM)" like tariff structure for energy storage.

The CPUC fiscal analysis concludes that implementing this bill will require:

- One permanent PURA V to support the proceeding
- One permanent ALJ II to preside over the proceeding
- Half-time PUC Counsel to advise on legal issues in the first two years of the proceeding

Additionally, a \$500,000 consultant budget would be needed over the course of two years to build an analytic “public tool” to support optimal rate design that achieves net ratepayer benefits without cross subsidy. The Base Year cost for all the positions is \$418,509 plus an additional total of \$500,000 in consulting fees in Year One and Year Two.

The Consumer Affairs Branch (CAB) of the CPUC may experience an increase in calls and written complaints for the reasons detailed in the ratepayer impact section above. Based on previous experience with similar complaints in regard to NEM complaints, CAB can expect a moderate number of complaints from consumers, but CAB expects to be able to absorb the impact.

SB 886 requires the Commission to require electrical corporations to offer time-of-use pricing or dynamic pricing to customers using energy storage at their premises. It also requires the CPUC to determine appropriate targets, if any, for load-serving entities to procure viable and cost-effective energy storage systems to be achieved by December 31, 2030. To meet these requirements, the IOUs would need to file tariffs for their time-of-use or dynamic pricing in a rate-setting proceeding; additionally, a policy setting proceeding would be needed for the determination of the targets if any are adopted.

Evaluation of these tariffs and setting new energy storage targets could either require a new proceeding or it could be incorporated into an existing proceeding. Regardless the venue, it will still require significant effort to evaluate the merits of the time-of-use and dynamic pricing, and to determine new storage targets. Further, it would require multiple applications from IOUs for procurement of energy storage over a 10 year period to achieve the 2030 targets.

The CPUC fiscal analysis concludes that implementing this bill will require estimates:

- One permanent PURA V for reviewing IOU tariff filings, and developing policy for determination of storage targets if any, and analyzing procurement filings;
- One permanent ALJ II to manage new track of an existing proceeding or to manage a new proceeding.
- Half-time PUC Counsel to review any legal matters.

The CPUC also estimates hiring a consultant to analyze data, and determine cost-effective storage targets. The scope of activities in this bill runs until 2030, so it's reasonable to assume that these are all permanent positions. The Base Year cost for all the positions is \$418,509 plus an additional \$200,000 in consulting fees in Year One.

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AB 2454 (Williams): Demand Response (amended 8/2/16) -
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB2454

AB 2630 (Salas): Central Valley Transmission & Renewables (amended 8/2/16) -
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB2630

AB 2868 (Gatto): Energy Storage (amended 8/2/16) -
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB2868

SB 886 (Pavley): Energy Storage (amended 8/1/16) -
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB886